REMARKS

Currently, claims 1-15 and 17-30 are presented for examination. Of these claims, claims 1, 3, 6-7, 9, 11, 13, 18, 21, 24, and 27-29 have been amended. Claim 16 has been canceled. Claim 30 has been added. The claims have been amended to further clarify the invention. Support for the claim amendments and the newly added claim can be found throughout the original disclosure and no new matter has been introduced by these amendments (See, Applicants' original disclosure, e.g., FIGS. 3-6a and 11 and corresponding description at page 13, line 11 to page 16, line 28 and at page 18, lines 14-22).

CLAIM REJECTIONS UNDER 35 USC §103

In the aforementioned Office Action, claims 1-29 have been rejected under 35 USC § 103 as being unpatentable over U.S. Patent 4,005,349 to Brian in view of U.S. Patent 4,633,418 to Prucher. However, the claim rejections do not appear to address each and every limitation in the claims. It is noted that the Office Action fails to even attempt to address at least the following limitations in the claims: position sensors and position magnets (claims 3 and 28); cooperation between a first carriage moving on a first path and a second carriage moving on a second path to perform a manufacturing operation (claims 7, 18, 24, and 27) and switching magnets (claim 28). In addition, the claim rejections do not appear to show how the two references are combined to teach the claimed invention with respect to each and every one of the rejected claims. Moreover, the Office Action indicated that although "Brian does not specifically teach or suggest the use of second assemblies or carriages as claimed by the instant invention... it would have been obvious to one of ordinary skill in the art at the time the invention was made to have included a plurality of assemblies, paths, carriages, tools." However, there is no support for such assertions, let alone in the context of the claimed invention. Notwithstanding, Applicants believe that these references, as understood, do not support the claim rejections, singly or combined.

Specifically, claim 1 recites a system for performing a manufacturing operation relative to at least a first path comprising:

> a plurality of first carriages ...;
>
> a plurality of first active elements operatively associated with a plurality of first reactive elements, each of said first reactive elements associated with a particular one

said plurality of first carriages, to produce relative movement between the first carriages and the first path, with each of said first active elements being independently activated to cause such relative movement;

a plurality of rows of switching sensors with each of said rows being operatively associated with a particular one of said first carriages, said rows being arranged along said first path, each particular one of said switching sensors being operatively associated with a particular one of said first active elements so as to enable activation of that particular first active element **when the particular one of said first carriages operatively associated with the row of switching sensors that includes the particular switching sensor traverses within operative proximity of the particular switching sensor**;

at least one controller...; and

a first tool...;

wherein the controller selectively controls the amount of activation of said first active elements to independently direct the first carriages along the path so that the manufacturing operation can at least partially be conducted by the first tool.

As compared with the system recited in claim 1, the system disclosed in the Brian reference is configured differently and functions in a different way. For example, Brian discloses a plurality of sensing means attached to the carriage which are actuated by cooperating coded means disposed at specified stations along the path of the carriage's travel (Brian, e.g., at col. 9, line 58 to col. 10, line 40 and col. 11, line 47 to col. 13, line 60). The particular address of each station is sensed by micro-switch sensors positioned in a channel rail movable with the carriage along the path. Thus, when the strips in the coded means are approached, they engage the corresponding sensing means on the carriage to determine the station address, and detecting the desired station address causes the carriage drive motor to slow down (Brian, e.g., at col. 10, lines 10-16 and col. 12, lines 4-13). The carriage is controllably moved automatically and independently along the path by way of the drive motor.

Brian fails to teach or suggest **a plurality of rows of switching sensors with each of said rows being operatively associated with a particular one of said first carriages.** The sensors in Brian are actually located on the channel rail that moves with the carriage. Thus, Brian fails to teach or suggest "**a plurality of rows of switching sensors... said rows being arranged along said first path**". Furthermore, the rows of "sensors" of Brian are not associated with particular one of the carriages. The coding means at each work station flips a series of switches on the channel rail attached to a carriage. This causes a certain number of procedures to

take place at a particular work station but fails to **enable activation of an active element when...a particular one of the carriages traverses within proximity to a sensor**. The system of Brian only allows for independent control of carriages with respect to each workstation; it does not allow for independent control of the carriages with respect to each other.

As a further comparison, the Prucher reference teaches a multiple carrier control system and linear drive motors. Prucher teaches that as a carrier unit passes by an induction motor, a position indicator, which is attached to the carrier, is read by a position sensor which is located near the induction motor (Prucher, e.g., at col. 1, line 66 to col. 2, line 15). The sensor provides position information to the control module which detects the presence or absence of the carrier (Prucher, e.g., at col. 2, lines 66). Thus, the position sensors are used for keeping track of the carriers (Prucher, e.g., at col. 2, lines 64-68). Prucher fails to teach the **switching sensors** of the invention as claimed. The sensors of Prucher do not **enable activation** of a particular first active element. The sensors only provide feedback information to a controller which then allows for a certain amount of power to be supplied to the linear conduction motor or active element. The sensors of Brian are analogous to the **position sensors** of the present invention as claimed in claim 3. Unlike the present invention as claimed, the system of Prucher is not capable of functioning in an open loop environment. Stated another way, the position sensors in Prucher are unlike the switch sensors of claim 1, in form as well as function.

Accordingly, Prucher does not make up for Brian's deficiency, and neither one of them, singly or combined, teaches or suggests every element of the claimed invention as recited in claim 1. For this reason, claim 1 is allowable over the prior art.

Claim 21, is directed to a method for performing a manufacturing operation relative to a first path. This method requires switching sensors that are configured and operate similarly to those in claim 1. Accordingly, claim 21 is allowable over the prior art for the same reasons as claim 1.

With respect to claim 27, the system for performing a manufacturing operation includes two paths, a first path and a second path. This system, includes four main elements as follows:

> a plurality of first active elements arranged along a first path;
> a plurality of second active elements arranged along a second path;

at least one first carriage mounted for movement relative to the first path,...; and

at least one second carriage mounted for movement relative to the second path,...;

at least one controller providing independent control of the activation of each one of the first and second active elements in order to provide independent movement of each of the first and second carriages relative to the first and second paths, wherein the first and second tools cooperate to perform at least part of the manufacturing operation.

As understood, neither Brian nor Prucher teach or suggest, singly or in combination, the two-paths system of claim 27. As indicated above, the alleged knowledge in the art of such two-path system, as suggested by the Office Action, is not supported by these references, nor is there any apparent showing in the Office Action of common knowledge in the art of such system. Moreover, neither of these references, singly or combined, teaches or suggests controlling the two-path system in the manner as recited in claim 27, let alone for the purpose of having the tools cooperate to perform at least part of the manufacturing. Accordingly, claim 27 is allowable over the cited art for these further reasons.

Claim 28 is allowable over the prior art for the reasons stated above with respect to switching sensors and position sensors. Specifically, claim 28 recites a system comprising:

a plurality of carriages including at least one primary carriage, and at least one secondary carriage...;

a primary row of **switching sensors**...;

a secondary row of **switching sensors**...;
at least one row of **position sensors** arranged along said path;

a primary **switching magnet**...;

a secondary **switching magnet**...; and
a controller responsive at least to said **position signals**...

This system includes both switching sensors and position sensors. As discussed above neither Brian or Prucher, alone or in combination, even teach or suggest switching sensors responsive to a particular carriage. The references certainly fail to teach or suggest switching magnets, as claimed. For these reasons, claim 28 is allowable over the prior art.

Burden on Office

The Office is reminded that in order to establish prima facie obviousness, three criteria must be met:

> there must be "some suggestion or motivation...to modify the reference or to combine reference teachings";
>
> there must be a "reasonable expectation of success"; and
>
> the prior art reference (or references when combined) must teach or suggest all the claim limitations." (MPEP 2143)

The Office Action has failed to provide proper motivation to modify or combine the prior art. For instance, the rejection has provided no rationale as to how "simplicity" is achieved by using the linear motors of Prucher or why one would be motivated to simplify the system of Brian. The Office Action has also failed to address several limitations as discussed above to show that each and every limitation is taught by the prior art. As such these rejections are improper and should be withdrawn.

It is further noted, that the rejection seems to only use Prucher to address claim 5 wherein the use of electrically conductive coils is claimed. The Office is reminded that each claim should be addressed independently. If the Office believes that all the limitations of claim 1 are met by Brian, then the rejection should be made under 35 USC §102. If the Office believes that claim 1 is obvious in view of only Brian, then the rejection must include proper Graham factual inquiries. Since the Office Action has failed to do either of these, the rejections are improper and should be withdrawn.

Claims 2-15 and 17-20; 22-26; and 29 are allowable over the cited art for the same reasons as independent claims 1, 21 and 28, from which they respectively depend.

CONCLUSION

Applicants thanks the Examiner for the Office Action and believe this response to be a full and complete response to such Office Action. In view of the foregoing, Applicants respectfully request reconsideration and withdrawal of the rejection of claims 1-15 and 17-29. As the application is believed to be in condition for allowance, Applicants respectfully request a Notice of Allowability. The Examiner is invited to contact the undersigned representative should any further issues arise

Respectfully submitted,

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